

CLAIM AMENDMENTS

Please amend the claims (~~striketrough~~ or ~~[[double-brackets]]~~ indicating deletion and underline indicating insertion) as follows:

1. (Previously amended) A surgical device for separating corneal epithelium from Bowman's layer of a cornea of an eye, the surgical device comprising:

a positioning ring for temporary attachment to the eye; and

a separator assembly including a means for separating the corneal epithelium from the Bowman's layer while leaving the Bowman's layer intact as the separating means moves across the positioning ring, wherein the separating means includes a blunt polymeric separating edge that is not sufficiently sharp to sever the Bowman's layer, and wherein the separator assembly is structured and disposed to carry the separating means across the positioning ring.

2. (Canceled)

3. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material selected from acetals, (meth)acrylates, acrylics, alkyds, polycarbonates, polyolefins, polyesters and co-polyesters, polymethylpentene, polypropylene, polysulfones, cellulosics, styrene acrylic co-polymers, fluoropolymers, nylons, polystyrene, polyetheretherketones (PEEK), polyarylates, polyetherimides, styrene acrylonitrile, silicones, epoxys, polyvinyl chloride, urethanes, acrylonitrile-butadiene-styrene (ABS), methylmethacrylate-acrylonitrile-butadiene-styrene (MABS), allyl diglycolcarbonate, and combinations thereof.

4. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material selected from polycarbonates, PEEK, polystyrenes, MABS, acetal homopolymers, PMMA, and combinations thereof.

5. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material having a flexural modulus of at least about 1.5 GPa according to ASTM D790.

6. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material having a tensile strength at yield of at least about 25 MPa according to ASTM D638.

7. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material having either a Rockwell M hardness greater than or equal to 70, or a Rockwell R hardness greater than or equal to 90, according to ASTM 785.

8. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material having a toughness of at least about 1 J/cm², according to ISO 179 Charpy Impact Test, unnotched at 23 °C.

9. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material and an inorganic filler material selected from carbon powder, carbon fibers, glass powder, glass fibers, and combinations thereof.

10. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a transparent material.

11. (Previously amended) A surgical device as claimed in Claim 10, wherein said transparent material has a light transmission greater than about 50 percent, and a haze factor less than about 25 percent, in accordance with ASTM D1003.

12. (Previously amended) A surgical device as claimed in Claim 10, wherein said transparent material further comprises a tinting agent.

13. (Previously amended) A surgical device as claimed in Claim 1, wherein said polymeric separating edge comprises a polymeric material having a Vicat softening point, measured by ASTM D1525, of less than 120 °C.

14. (Previously amended) A separator for use with a surgical device including a positioning ring for temporary attachment to an eye and a guide assembly that guides the separator along a travel path that intersects the eye, said separator comprising:

means for separating corneal epithelium from Bowman's layer in a cornea of the eye as the separating means moves along the travel path, wherein the separating means includes a polymeric separating edge that is blunt so that it will not cut into the Bowman's layer as the separating edge separates the corneal epithelium from the Bowman's layer.

15. (Previously amended) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises an acetal, an acrylic, an alkyd, a polycarbonate, a polyesters or co-polyester, polymethylpentene, polypropylene, a polysulfone, a cellulosic, a styrene acrylic co-polymer, a fluoropolymer, polystyrene, a polyetheretherketone (PEEK), a polyarylate, a polyetherimide, styrene acrylonitrile, a silicone, epoxys, polyvinyl chloride, a urethane, acrylonitrile-butadiene-styrene (ABS), methylmethacrylate-acrylonitrile-butadiene-styrene (MABS), allyl diglycolcarbonate, or a combination thereof.

16. (Original) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises polycarbonate, PEEK, polystyrene, MABS, an acetal homopolymer, PMMA, or a combination thereof.

17. (Original) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises a material having a flexural modulus of at least about 1.5 GPa according to ASTM D790.

18. (Original) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises a material having a tensile strength at yield of at least about 25 MPa according to ASTM D638.

19. (Original) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises a material having either a Rockwell M hardness greater than or equal to 70, or a Rockwell R hardness greater than or equal to 90, according to ASTM 785.

20. (Original) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises a material having a toughness of at least about 1 J/cm^2 , according to ISO 179 Charpy Impact Test, unnotched at 23 °C.

21. (Previously amended) A separator for use with a surgical device including a positioning ring for temporary attachment to an eye and a guide assembly that guides the separator along a travel path that intersects the eye, said separator comprising:

a polymeric separating edge that is blunt so that it separates corneal epithelium from Bowman's layer in a cornea of the eye as the separator moves along the travel path and so that it will not cut into the Bowman's layer as the separator separates the corneal epithelium from the Bowman's layer, wherein said polymeric separating edge further comprises an inorganic filler material selected from the group of carbon powder, carbon fibers, glass powder, and combinations thereof.

22. (Original) A separator as claimed in Claim 14, wherein said polymeric separating edge is transparent.

23. (Original) A separator as claimed in Claim 22, wherein said polymeric separating edge comprises a material having a light transmission greater than about 50 percent, and a haze factor less than about 25 percent, measured in accordance with ASTM D1003.

24. (Previously amended) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises a material having a light transmission greater than about 50 percent, and a haze factor less than about 25 percent, measured in accordance with ASTM D1003, and wherein said material further comprises a tinting agent.

25. (Previously amended) A separator as claimed in Claim 14, wherein said polymeric separating edge comprises a material having a Vicat softening point, as measured by ASTM D1525, of less than 120 °C.

26-30. (Canceled)

31. (Previously amended) A method for separating at least a portion of an epithelium from a cornea of an eye, so that an intact Bowman's layer is exposed, said method comprising the steps of:

- (a) fixing a positioning ring to an eye so that the cornea at least partially extends therethrough;
- (b) moving a separator having a blunt polymeric separating edge across at least a portion of the cornea to separate the epithelium from the cornea, leaving Bowman's layer intact;
- (c) retracting the separator outside the positioning ring; and
- (d) disposing of the separator after a single use.

32. (Original) A method as claimed in Claim 31, further comprising the step of flattening at least a portion of the cornea prior to moving the separator along the travel path.

33. (Canceled)

34. (Previously amended) The method of Claim 31, wherein the polymeric material of the blunt polymeric separating edge deforms at a temperature of less than about 100° C to prevent re-use of the separator.

35. (Previously added) A separator as claimed in Claim 14, wherein the separator comprises a solid body of a polymeric material with the polymeric separating edge defined at a leading edge thereof.

36. (Previously added) A separator as claimed in Claim 14, wherein the separator comprises a solid body of a metallic or ceramic material with the separating edge having a polymeric coating.

37. (Previously added) A separator as claimed in Claim 14, wherein the separator comprises a front portion that includes the polymeric separating edge and a rear metallic portion joined to the front portion.

38. (Previously amended) The method of Claim 31, wherein the step of moving the separator including doing so without constraining the epithelium during the separation so that the separated epithelium is left free to assume an unhindered position and configuration.

39. (Canceled)

40. (Previously added) A surgical device as claimed in Claim 1, wherein said polymeric separating edge is flat and extends between a horizontal bottom surface and an upper surface that is angled and asymmetrical relative to the bottom surface.

41. (Previously added) A surgical device as claimed in Claim 40, wherein said polymeric separating edge has an edge thickness of at least about 200 microns.

42. (Previously added) A surgical device as claimed in Claim 1, wherein said polymeric separating edge is rounded and extends between a horizontal bottom surface and an upper surface that is angled and asymmetrical relative to the bottom surface.

43. (Previously added) A surgical device as claimed in Claim 1, wherein said polymeric separating edge includes an angled point and extends between a horizontal bottom surface and an upper surface that is angled and asymmetrical relative to the bottom surface.